

We claim:

1. A device for capturing a substance, the device comprising:
a generally tubular body including
a generally tubular inner surface defined by a first layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and
a generally tubular outer surface generally disposed radially outwardly from the inner surface, wherein a portion of the outer surface is adapted to capture the substance.
2. The device of claim 1, wherein the first layer includes a barrier material.
3. The device of claim 2, wherein the barrier material is breathable to water vapor.
4. The device of claim 1, further comprising a second layer coupled to the first layer.
5. The device of claim 4, wherein the second layer includes at least two layers of material such that the second layer constitutes a laminate.
6. The device of claim 4, wherein the second layer includes a nonwoven material.
7. The device of claim 6, wherein the nonwoven material is a thermoplastic material.
8. The device of claim 6, wherein the nonwoven material is a polypropylene material.
9. The device of claim 6, wherein the nonwoven material is a hydrophobic material.

10. The device of claim 6, wherein the nonwoven material is a hydrophilic material.

11. The device of claim 6, wherein the nonwoven material is a mixture of hydrophobic and hydrophilic materials.

12. The device of claim 6, wherein the nonwoven material is selected from the group consisting of spunbonded fiber materials, meltblown fiber materials, spunbonded/meltblown/spunbonded fiber materials, spunbonded/meltblown fiber materials, coform, and bonded carded materials.

13. The device of claim 6, wherein the nonwoven material comprises an elastic component.

14. The device of claim 13, wherein the elastic component includes a fibrous material.

15. The device of claim 13, wherein the elastic component includes a film.

16. The device of claim 1, wherein the portion is adapted to retain the substance.

17. The device of claim 1, wherein the portion is adapted to release the substance.

18. The device of claim 1, wherein the portion is adapted to release the substance to a biosensor for testing.

19. The device of claim 1, wherein the substance is an indicator agent.

20. The device of claim 19, further comprising a second portion of the outer surface adapted to capture a second substance.

21. The device of claim 20, wherein the second substance is a second indicator agent.

22. The device of claim 20, wherein the second substance is a beneficial agent.

23. The device of claim 19, wherein the portion is adapted to deposit the indicator agent on a test subject.

24. The device of claim 23, wherein the test subject is associated with a body.

25. The device of claim 19, wherein the indicator agent is adapted to indicate pH.

26. The device of claim 25, wherein the pH indication is used to detect premature rupture of membrane.

27. The device of claim 25, wherein the pH indication is used to detect bacterial or trichomonal vaginal infections.

28. The device of claim 19, wherein the indicator agent is selected from the group consisting of: methyl red, bromothymol blue, nitrazine, sulfanilamide compounds with acidic buffers, diazonium salts with acidic buffers, glucose oxidase / peroxidase, indoxylcarbonic acid ester modified with a diazonium salt, dichlorobenzene diazonium tetrafluoroborate, tetramethylbenzidine in the presence of peroxide, and methoxybenzene diazonium tetrafluoroborate.

29. The device of claim 1, further comprising an elastic component.

30. The device of claim 29, wherein the elastic component includes a fibrous material.

31. The device of claim 29, wherein the elastic component includes a film.

32. The device of claim 1, wherein the barrier material includes a moisture

barrier, the moisture barrier being substantially impermeable to liquids when contacted therewith.

33. The device of claim 32, wherein the moisture barrier comprises a plastic film.

34. The device of claim 33, wherein the plastic film is a microporous film.

35. The device of claim 32, wherein the moisture barrier comprises a multi-layered laminate.

36. The device of claim 35, wherein one of the layers of the moisture barrier comprises a nonwoven web of fibrous material.

37. The device of claim 35, wherein one of the layers of the moisture barrier comprises a vapor-permeable film.

38. The device of claim 1, wherein the substance is selected from the group consisting of: saliva, mucous, lung-based sputum, oral plaque, nasal fluid, tears, ear wax, vaginal fluid, cervical fluid, menses, seminal fluid, urine, blood, feces, sweat, skin oils, skin cells, scalp debris, cerebrospinal fluid, amniotic fluid, synovial fluid, serous fluid, and bronchial washings.

39. The device of claim 1, wherein the substance is a beneficial agent, and wherein a portion of the device is adapted to deposit the beneficial agent on a test subject.

40. The device of claim 39, wherein the beneficial agent is selected from the group consisting of: medicaments, diaper rash ointments, alcohols, anesthetics, analgesics, facial make-up removal agents, anti-microbials, antibacterials, baking powder, moisturizing agents, lubricants, vitamins, and nutrients.

41. A method for collecting a sample from a test subject, the method comprising:

providing a device adapted to capture and retain the sample, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

inserting a finger into the pocket; and

contacting the sample with the device.

42. The method of claim 41, further comprising:

providing a second device adapted to capture and release an agent, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

inserting a finger into the pocket; and

contacting the sample with the second device such that the agent is released.

43. The method of claim 41, wherein the contacting act includes contacting a sample selected from the group consisting of: saliva, mucous, lung-based sputum, oral plaque, nasal fluid, tears, ear wax, vaginal fluid, cervical fluid, menses, seminal fluid, urine, blood, feces, sweat, skin oils, skin cells, scalp debris, cerebrospinal fluid, amniotic fluid, synovial fluid, serous fluid, and bronchial washings.

44. The method of claim 41, wherein the providing act includes providing a device with an interior layer including a barrier material, and wherein the barrier material is breathable to water vapor.

45. The method of claim 44, wherein the barrier material includes a moisture barrier, the moisture barrier being substantially impermeable to liquids when contacted therewith.

46. A method for analyzing a sample, the method comprising:

providing a device adapted to capture and retain the sample, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

contacting the substance to be sampled with the device; and

analyzing the device using a reader.

47. The method of claim 46, further comprising:

providing a second device adapted to capture and release an agent, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

inserting a finger into the pocket; and

contacting the test subject with the second device such that the agent is released.

48. The method of claim 46, wherein the contacting act includes contacting a substance selected from the group consisting of: saliva, mucous, lung-based sputum, oral plaque, nasal fluid, tears, ear wax, vaginal fluid, cervical fluid, menses, seminal fluid, urine, blood, feces, sweat, skin oils, skin cells, scalp debris, cerebrospinal fluid, amniotic fluid, synovial fluid, serous fluid, and bronchial washings.

49. The method of claim 46, wherein the providing act includes providing a device with an interior layer including a barrier material, and wherein the barrier material is breathable to water vapor.

50. The method of claim 49, wherein the barrier material includes a moisture barrier, the moisture barrier being substantially impermeable to liquids when contacted therewith.

51. A method for analyzing a sample, the method comprising:

providing a device adapted to capture and retain the sample, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface including an indicator agent;

contacting the substance to be sampled with the device; and

observing the reaction of the sample with the indicator agent on the device.

52. The method of claim 51, further comprising:

providing a second device adapted to capture and release an agent, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

inserting a finger into the pocket; and

contacting the test subject with the second device such that the agent is released.

53. The method of claim 51, wherein the contacting act includes contacting a substance selected from the group consisting of: saliva, mucous, lung-based sputum, oral plaque, nasal fluid, tears, ear wax, vaginal fluid, cervical fluid, menses, seminal fluid, urine, blood, feces, sweat, skin oils, skin cells, scalp debris, cerebrospinal fluid, amniotic fluid, synovial fluid, serous fluid, and bronchial washings.

54. The method of claim 51, wherein the providing act includes providing a device with an interior layer including a barrier material, and wherein the barrier material is breathable to water vapor.

55. The method of claim 54, wherein the barrier material includes a moisture barrier, the moisture barrier being substantially impermeable to liquids when contacted therewith.

56. The method of claim 51, wherein the observing act includes observing the reaction without electromechanical assistance.

57. The method of claim 51, wherein the observing act includes observing the reaction with the aid of a light source.

58. The method of claim 51, wherein the observing act includes observing the reaction using a reader.

59. A method for analyzing a test subject, the method comprising:

providing a device adapted to capture and release an indicator agent, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface including the indicator agent;

contacting the test subject to be analyzed with the device, such that at least a portion of the indicator agent is released to the test subject; and
observing the reaction of the test subject with the indicator agent.

60. The method of claim 59, further comprising:

providing a second device adapted to capture and release an agent, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface;

inserting a finger into the pocket; and

contacting the test subject with the second device such that the agent is released.

61. The method of claim 59, wherein the providing act includes providing a device with an interior layer including a barrier material, and wherein the barrier material is breathable to water vapor.

62. The method of claim 61, wherein the barrier material includes a moisture barrier, the moisture barrier being substantially impermeable to liquids when contacted therewith.

63. The method of claim 61, wherein the observing act includes observing the reaction without electromechanical assistance.

64. The method of claim 61, wherein the observing act includes observing the reaction with the aid of a light source.

65. The method of claim 61, wherein the observing act includes observing the reaction using a reader.

66. A method for applying a substance to a test subject, the method comprising:
providing a device adapted to capture and release the substance, wherein the device includes a generally tubular body including a generally tubular inner surface defined by an interior layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and a generally tubular outer surface, wherein the outer surface includes the substance;

contacting the test subject with the device such that at least a portion of the substance is released from the device and deposited on the test subject.

67. The method of claim 66, wherein the providing act includes providing an indicator agent.

68. The method of claim 67, wherein the indicator agent is selected from the group consisting of: methyl red, bromothymol blue, nitrazine, sulfanilamide compounds with acidic buffers, diazonium salts with acidic buffers, glucose oxidase / peroxidase, indoxylcarbonic acid ester modified with a diazonium salt, dichlorobenzene diazonium tetrafluoroborate, tetramethylbenzidine in the presence of peroxide, and methoxybenzene diazonium tetrafluoroborate.

69. The method of claim 66, wherein the providing act includes providing a beneficial agent.

70. The method of claim 69, wherein the beneficial agent is selected from the group consisting of: medicaments, diaper rash ointments, alcohols, anesthetics, analgesics, facial make-up removal agents, anti-microbials, antibacterials, baking powder, moisturizing agents, lubricants, vitamins, and nutrients.

71. A device for capturing a substance, the device comprising:

a generally tubular body including

a generally tubular inner surface defined by a first layer, the first layer, wherein the barrier material includes a moisture barrier that is substantially impermeable to liquids when contacted therewith, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and

a generally tubular outer surface generally disposed radially outwardly from the inner surface, wherein a portion of the outer surface is adapted to capture the substance.

72. A diagnostic kit comprising:

a collection device including a generally tubular body, the body including

a generally tubular inner surface defined by a first layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and

a generally tubular outer surface generally disposed radially outwardly from the inner surface, wherein a portion of the outer surface is adapted to capture the substance; and

an indicator device adapted to generate a diagnosis using the substance from the collection device.

73. A sample collection system comprising:

a first collection device to collect a first substance, wherein the first collection device includes a generally tubular body, the body including

a generally tubular inner surface defined by a first layer, the inner surface defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal end being generally closed and the proximal end being generally open, the proximal end being configured to allow the insertion of a finger into the pocket through the proximal end, and

a generally tubular outer surface generally disposed radially outwardly from the inner surface, wherein a portion of the outer surface is adapted to capture the substance; and

a second collection device to collect a second substance.

74. A sample collection system comprising:

a first a collection device including a generally tubular body, the body including
a generally tubular inner surface defined by a first layer, the inner surface
defining a pocket therewithin, the pocket having a distal end and a proximal end, the distal
end being generally closed and the proximal end being generally open, the proximal end
being configured to allow the insertion of a finger into the pocket through the proximal end,
and

a generally tubular outer surface generally disposed radially outwardly from
the inner surface, wherein a portion of the outer surface is adapted to capture the
substance; and

a second collection device larger than the first collection device.